

On the other hand, the Federally Threatened bald eagle (*Haliaeetus leucocephalus*) has been increasing in North Carolina since the 1980s. Heavy use of DDT and other chemicals reduced the state's nesting population to zero pairs during most of the 1970s and 1980s, but a hacking and release program at Lake Mattamuskeet in the 1980s, along with the banning of DDT in the United States, has allowed the eagles to recover their former coastal breeding range, plus expand to new sites inland thanks to the construction of large reservoirs. In the past several years, a pair has nested at Buckhorn Reservoir along the Johnston-Wilson county line. Though the recent raising of the water level of the lake has killed the nest tree, the nest was still active in 2000. It is likely that the tree will fall into the lake soon and the birds will have to build a new nest in a live pine elsewhere near the lake.

The relatively widespread loggerhead shrike (*Lanius ludovicianus*) and the black vulture (*Coragyps atratus*), both State Special Concern, were encountered several times during the inventory. The vulture presumably nests in the floodplains but forages over much of the county. The shrike almost certainly has declined as a breeder in the county (and elsewhere in the state) in recent decades as a result of the loss of extensive pastures and farmlands. The Federal Species of Concern cerulean warbler (*Dendroica cerulea*) was noted during the inventory on territory along the Neuse River in the Howell Woods Preserve. Coupled with a previous report of the species along the Neuse, there is hope that a very small breeding population of this species, which nests primarily in the state's mountain region but also sparingly along the Roanoke River, is established in Johnston County. Also along the Neuse River is a growing population of Mississippi kite (*Ictinia mississippiensis*). This Significantly Rare raptor has been seen for a decade in and over the floodplain below I-95, and during the survey an active nest was discovered by Howell Woods staff, only the third or fourth nest known for the kite in the state.

Other Significantly Rare vertebrates found in the county are the eastern fox squirrel (*Sciurus niger*), the pine barrens treefrog (*Hyla andersonii*), and the Roanoke bass (*Ambloplites cavifrons*). The squirrel was noted during the inventory at several sites containing stands of longleaf pine; seeds of the cones are favored foods of this animal. The species, a game animal, likely occurs over a greater area of the county than just the two sites noted. The frog typically is found in pocosins and seepages just to the south and southwest of Johnston County, but it has been found at least once, though in 1974, in the county. The bass, restricted to just southern Virginia and northern North Carolina, has been found in the Little and Neuse rivers in Johnston County.

Invertebrate groups other than mussels have apparently not been well studied in the county, though considerable data on butterflies were gathered during the course of the inventory. One rare butterfly, the two-spotted skipper (*Euphyes bimacula*), was encountered at two sites; this species seems to be present in "savanna-like" habitats such as wet powerline clearings and wide, damp roadsides. The state endemic North Carolina spiny crayfish (*Orconectes carolinensis*) has been found in several rivers and creeks in the county. A rare caddisfly (*Matrioptila jeanae*) and a rare mayfly (*Leptohyphes robacki*) have been found in the Little River.

In addition to rare species, the county has several important wildlife habitats. The wide floodplain of the Neuse River below I-95 contains extensive forests, some of which have recently